



# ***The Resonator***

**Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club**

**Volume 10, Number 4**

**[www.FairLawnARC.org](http://www.FairLawnARC.org)**

**April 2025**

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## **President's Message**

First thing I want to do is thank all of our ghost members. I am not talking about members who are not local to the club. I am talking about members who pay their dues but never get involved in anything going on at the club. The 25 or so active members want to thank you for your money. With your money we were able to upgrade three old computers, and buy a new 6/10 meter antenna and get it installed. We now can operate 2, 6, 10, 12, 17, 20, and 40 meters

My only hope is for some of our ghost members to become real active members. Remember the club is open every Tuesday and Friday night from 6:30 pm to 9 pm and Sunday from 9am to noon or sometimes later.

At the April meeting, Gene K2KJI will have done a half hour live coffee talk at the Senior Center. His presentation was on the work of HamSCI – for which our colleague Ed WX2R is the Public Information Officer. The talk was about W3USR, the new amateur radio station at the University of Scranton. We are planning a day trip to the University to see their superstation. The date to go there is Thursday April 24, 2025. Mark your calendar. Please contact Van W2DLT for reservation and information.

PLEASE note that all presentations starting with the May meeting will begin at 7 PM with the regular business meeting starting at 7:30 PM

At the May meeting Ria N2RJ will be doing a presentation about "Doing HF in an electric vehicle."

In June the entire time will be spent on field day.

July will bring us a presentation by Andrea Slack K2EZ. Her topic will be "What is a Rover during a contest?" and she will be bring her "Rover Car" for display.

On Sunday May 4, 2025 we will have a Portable Day. Again, it will be held in Memorial Park, but not in our usual area. It will be located behind the kiddie splash pool area. Lunch will be served.

**Remember:  
Ham Radio Is a Contact Sport!**

**Continued on next page.**

## President's Message, continued

Mark your calendar for Thursday May 29, 2025. We have been invited again to participate in an Earth Day event at Paterson Great Falls National Historical Park - Overlook Park Area starting at 8:00AM to 2PM, where we are going to present different aspects of amateur radio. These are some of the same items we did at Super Saturday in Ridgewood.

On May 26<sup>th</sup> we will again be providing communications for the Memorial Day parade.

As you know, June will be a remarkably busy month with the Fair Lawn Street Fair on June 22<sup>nd</sup> (still looking for someone to help organize it) and don't forget that June 14, 2025 is the date for our 5<sup>th</sup> annual Hamfest. This is one of our largest events, and helps cover our expenses to run the club. This is an ALL-HANDS ON-DECK event for FLARC members.

I have tried to cover some of the items that the club will be doing. So please think about becoming a more active member and being part of a terrific club! PLEASE reach out to me or anyone on the board if you have an idea or a complaint.

73,  
Gene  
WO2W



## FLARC calendar of upcoming events

<b>April 18</b>	World Amateur Radio Day 1600 - 2100 EST
<b>April 24</b>	Day trip to Scranton Univ
<b>May 4</b>	FLARC Portable Day
<b>May 26</b>	Memorial Day Parade
<b>May 29</b>	Great Falls Earth Day
<b>June 14</b>	FLARC Hamfest
<b>June 21</b>	ARRL Kids Day
<b>June 22</b>	FL Street Fair
<b>June 28-29</b>	Summer Field Day
<b>July 2</b>	Fireworks Communications



## The Digital Radion Accelerator

by Jim Jalil W2KNG

### Dateline April 1:

One of the most interesting new developments in RF technology is the digital radion accelerator. After years of trial and error, false starts, holes (both rabbit and dark), and pits (both money and watermelon) those intrepid hams of the Podunk Hollow Radio Club have finally succeeded in developing a digital radion accelerator. Before this exciting new technology can be fully appreciated, however, perhaps a brief history and explanation of radion acceleration would be helpful.

Many hams engage in contesting, others chase DX, some do both. Other hams specialize in POTA, SOTA IOTA, EME, nets, fox hunting, rag chewing and donut consumption. Radion acceleration is of interest to all these hams.

Let's take contesting. For years hams have sought to gain an advantage over rival hams through many clever, happy-go-lucky and all in good fun ways. Some dig up a rival's buried coax, cut it in several places then rebury it just before the start of a contest. Others send emails telling rival hams they have won the Wyoming State Lottery but have to be physically present in Red Pony, Wyoming on the day of the contest to claim their prize. But one of the most popular ways to gain an advantage in contest multiplier hunting is to accelerate radions as they fly off the antenna. If properly accelerated, radions will arrive at the sought-after contest multiplier's antenna before the radions of any rivals. To accomplish this it is important that radions be accelerated to speeds faster than the radions of other testers. This is known in ham radio speak as radion acceleration.

The earliest attempts at radion acceleration date back to the early days of the spark gap. In those days to accelerate radions a spark gap emitter would be placed near an open window. While this did in fact result in radions traveling faster than radions emitted in say a concrete bunker or barn full of radion absorbing hay, the advantage was minimal.

The first real breakthrough in radion acceleration came in the late 1950s. It was the well known and respected FCC examiner Charles (Old Half Glasses) Finkleman who first developed antenna grease. He found that by applying grease consisting of a careful blend of electromagnetic lubricants to an antenna,

radions would fly off into the ether faster than radions emitted from antennas not coated in antenna grease.

Mr. Finkleman was granted a patent for "Finkleman's Antenna Grease" on April 1, 1959. Serious testers and DXers quickly adopted this method of radion acceleration. However, at first Finkleman's Antenna Grease was expensive and some derisively called it Big Gun Antenna Grease.

A petition was filed with the ARRL asking that any contact made using antenna grease be disqualified for DXCC purposes or any contest multiplier. The ARRL promised to give the petition a swift review. A decision denying the petition was duly published in QST 27 years later.

Old Half Glasses' patent, however, did not prevent several competitors from developing their own, slightly different and often improved versions of antenna grease. However the problem with all these early forms of antenna grease was that they had to be applied manually to dipoles, verticals and beam and Yagi elements and only lasted for several hours before their effectiveness evaporated. During long contests hams had to cease operating and climb towers and verticals or pull down dipoles to re-grease their antennas. Some serious testers, and others, soon took to employing antenna boys whose job was to re-grease antennas every few hours. Many a famous ham and Honor Roll member started out as an antenna boy.

The next real breakthrough in radion acceleration was the spray-on antenna lubricant. The advantage of the spray-on antenna lubricant was that using a special nozzle and jar, antenna lubricant could be sprayed on an antenna from the ground using an ordinary garden hose. The disadvantage was that several gallons of liquid antenna lubricant were necessary before an antenna could be fully coated and the lubricant, being a liquid, lasted only for a few minutes. This was actually a benefit to the antenna boy industry, as the antenna boy could remain on the ground and continually spray antennas with the lubricant for the duration of a contest.

For DXers the old antenna grease was still preferable as it could be applied to one's antenna and would last through several hours of a pileup before the antenna had to be re-greased and the pileup re-entered.

In the 1960s and 1970s several attempts were made to

Continued on next page.

### The Digital Radion Accelerator, continued

develop a radion accelerator that could be placed in series with the transmission line, eliminating the need for antenna grease or spray-on lubricant. The earliest devices were analog. These were found to be difficult to calibrate and the heat from the tubes required that the accelerator be kept in a bucket of dry ice.

In 1973 the ARRL conducted extensive tests at the ARRL lab in Newington Connecticut to determine if radions accelerated faster off an analog radion accelerator in series with the transmission line than an antenna coated in antenna grease. The results of the tests were published in QST 27 years later. In any event it was conclusively determined that antenna grease accelerated radions significantly faster than an analog accelerator.

The new development that has hams all over the world in a state of frenzied excitement is the digital radion accelerator. The digital radion accelerator is placed in series between the transceiver and the antenna, preferably as close to the antenna as possible. The circuitry is a bit complex but nothing a normal, typical, ordinary, run of the mill ham with multiple PhDs in nuclear physics, molecular biology and electrical engineering cannot easily master. In a nutshell, however, what happens is that when radions enter the accelerator they are subjected to laser-like gamma ray photons of alternating magnification in a capacitor induced acceletron coil, then fed into a loopy microchip made of gold enameled herring bone. The radions, so energized, speed off the antenna quicker than a ham at field day called to dinner.

When leaving the antenna the radions actually continue to accelerate until they hit the desired antenna. For those hams using the radion accelerator, either professionally manufactured or home brewed, they can be assured that their radions will easily outpace radions coming off ordinary antennas, even greased antennas, thus gaining a significant advantage in making QSOs with those sought after contest multipliers and rare DX stations.

Of course there are always those nay-sayers and party-poopers who repeat the tiresome old refrain, “radion acceleration isn’t ham radio” and “we never had radion accelerators when I was a novice and had to use a hamster running on a treadmill to power our rigs.”

A petition has been filed with the ARRL seeking to have DXCC credit or contest multipliers denied to any ham using a digital radion accelerator. A decision is expected some time before the end of the next solar cycle.

©2025 Jim Jalil W2KNG April 1, 2025

### EMCOMM

The Federal Communications Commission calls Emergency Communications (EmComm) “amateur radio’s highest calling.” Ham radio fits into a wide network of emergency services. These include the Federal Emergency Management Agency (FEMA), Community Emergency Response Team (CERT), the American Red Cross and Skywarn, among other services.

Amateur Radio contributes to this web of emergency services through Amateur Radio Emergency Services (ARES) and Radio Amateur Civil Emergency Service (RACES).

This all might seem a bit daunting at first. There may be some initial reluctance to get involved for a myriad of reasons such as “what can I contribute,” “I don’t have the time,” “I don’t have the skills.”

But we should all be guided by how the FCC views us... as a “service” and how the public views us, or at least should view us... as individuals with specialized skills ready to be put to use for the good of the community, especially in times of emergencies.

Here at FLARC we have members highly trained and deeply dedicated to EmComm. We should respect those that are involved. But we could use more. FLARC invites those who are not involved in EmComm to consider getting involved in emergency services in some way.

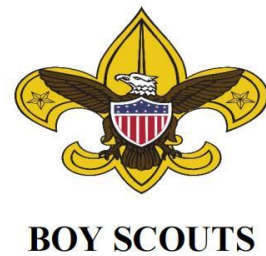
EmComm is in the highest tradition of amateur radio, and surely, its highest calling. Every one of the branches of emergency services uses ham radio operators. Why not get involved?

Once involved you will be trained by experienced hams and, once trained, be ready to do your part. Even if an emergency never arises (which hopefully is the case), the skills you will learn, and indeed at which you will become proficient, will make you a better ham.

To become involved with the FLARC EmComm SIG (Special Interest Group) join the subgroup on groups.io and contact Jim N2JLF at [N2JLF@arrrl.net](mailto:N2JLF@arrrl.net)

— Jim Jalil W2KNG





**2025 World Amateur Radio Day is April 18, 2025**

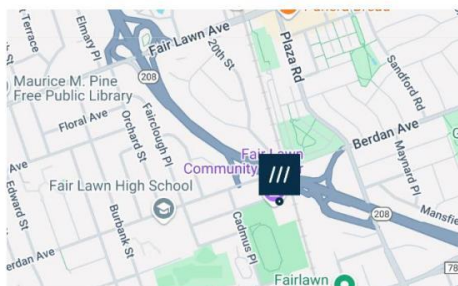
**Our club house will be open from 4PM to 9PM on Friday April 18, 2025**

Bring your group and join us to find out all about Amateur Radio and Wireless Technology, in live action. Amateur radio is as modern as ever.

We can help your group earn their merit badge!  
Visit and learn about the science of radio and talk to the world.

Can't make the date? Let us know what works for you!

LOCATION: George Fry Arts & Recreation Center, 10-10 20<sup>th</sup> Street, Fair Lawn, NJ 07410.



Try this for exact location -- <https://what3words.com/votes.pocket.change>

Visit our club website at <https://FairLawnARC.org>

## Ham Radio Class Forming Now

The ARC<sup>2</sup> Radio club will be holding  
a 2-day in-person Technician Radio License class  
where you can learn everything you need to pass your  
35-question exam and earn your  
**Technician (entry level) FCC Amateur Radio License.**

*The Technician license is your gateway to the  
world-wide excitement of Amateur Radio and  
emergency communication ... and now  
you do NOT need to learn Morse code!*

**Class: 2 days (Saturday and Sunday) April 26-27**

**Time: 8:00 am to 4:30 pm**

**Location: Fairfield, NJ Red Cross office**

209 Fairfield Road, Fairfield, NJ 07004  
(Entrance from parking lot)

**Class Fee: \$20** (snacks & facility)

**Exam Fee: \$15** (payable at exam)

**FCC Fee: \$35** (payable to FCC within 10 days of the exam)

**Schedule:**

- Class: all day Saturday, 8 am to about 4:30 pm
- Review: Sunday, 8:30 am to about 1 pm
- Exam: Sunday, after review

**Registration required:** *(with full name, address, cell number)*

*Registration closes April. 10<sup>th</sup> or when class reaches full capacity of 20.  
You will need to get an FCC Federal Registration Number (FRN),  
instructions for getting FRN upon registration.*

To register: email the instructor: **NB1LL@ARRL.net**

**Instructor: Bill Kelly, NB1LL** (that is a #1 in NB1LL)

The instructor will send confirmation with instructions for getting FRN

**ARRL** The national association for  
**AMATEUR RADIO®**

# Ham Radio Class Forming Now

ARC Squared Radio club will be holding  
a 2-day in-person Amateur General Radio License class  
where you can learn what you need to pass your  
35-question exam and earn your upgrade to a  
**General FCC Amateur Radio License.**

*The General license is the second of three  
U.S. Amateur Radio licenses.*

*To upgrade to General, you must hold a Technician license.  
Upgrading to a General conveys extensive HF privileges.*

**Class: 2 days (Saturday and Sunday) June 21-22**

**Time: 8:00 am to about 4:30 pm**

**Location: Fairfield, NJ Red Cross office**

209 Fairfield Road, Fairfield, NJ 07004  
(Entrance from parking lot)

**Class Fee: \$20** (snacks & facility)

**Exam Fee: \$15** (payable at exam)

## **Schedule:**

- Pre-Studying is required
- Class: all day Saturday, 8 am to about 4:30 pm
- Review: Sunday, 8 am to about 1 pm
- Exam: Sunday, after review

**Registration required:** *(with full name, address, cell number, call sign)*  
*Registration closes June 10<sup>th</sup> or when class reaches full capacity of 20.*

To register or to ask questions, email: **NB1LL@ARRL.net**

**Instructor: Bill Kelly, NB1LL**

(that is a #1 in NB1LL)

**ARRL** The national association for  
AMATEUR RADIO®



## FLARC at Super Science Saturday

— Jim Jalil W2KNG

On March 1<sup>ST</sup> some intrepid members of the Fair Lawn Amateur Radio Club participated in an event entitled “Super Science Saturday” hosted by the Ridgewood School District and held at Ridgewood High School.

The purpose of Super Science Saturday is to showcase a myriad of science and technology related topics to school children from grammar school through middle school.

This annual event has become quite an elaborate affair and classrooms and hallways were filled with a wide variety of science and technology related presentations.

The way Super Science is set up is students and parents travel from presentation to presentation – learning and being exposed to all manner of scientific and technological disciplines. For example, students could see how dry ice expands oxygen, how the age of a tree can be determined from its rings, how mosquitoes breed and can be controlled. There were fossils from ancient animals and plants native to Bergen County. There were computer demonstrations and metallurgy experiments.

The technology of radio communication was not overlooked. As in past years, the Fair Lawn Amateur Radio Club was asked to demonstrate amateur radio communication. Led by Robert KD2SOG, members of FLARC set up a classroom designed to showcase amateur radio. A highlight of that showcase was a working FT8 station set up and operated by Dave WO2W.

There were also displays and information about the recent communication with the International Space Station. There was an ongoing participatory demonstration of Morse Code manned by Fred W2ABE.

What proved to be a hit with many of the young students was our raffle drum stocked with QSL cards from around the world (donated by Dave WO2X). The children would spin the drum, pull out a QSL card, then find the country it came from on a large map.

When the students were told they could keep the QSL card they seemed delighted.

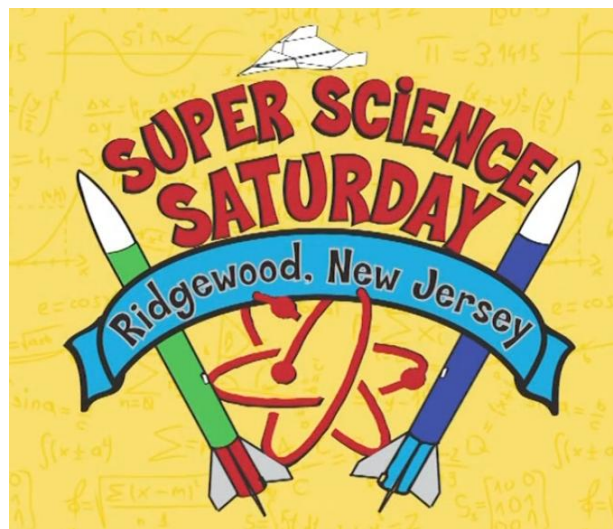
The main purpose of the presentation, however, was to explain to the visiting students and their parents how hams use radio to communicate around the world. Some students seemed particularly enthralled and asked many really good questions – not only about radio communication generally, but also how to become a ham radio operator. Every now and then one could see the wonder and excitement in a student’s eyes.

Perhaps a small spark might have been ignited here and there that may eventually lead to ham radio license or perhaps even a career in electronics. But mostly the satisfaction to the FLARC members present was that both students and their parents got an introduction to amateur radio and the science and technology behind radio communication. If that was the goal, then the mission was clearly accomplished.

Many thanks go out to the FLARC members who participated in Super Science Sunday. Events such as this are an important contribution to community service and an excellent way to showcase amateur radio... and yes, **“we still do that.”**

Participating in functions such as this are the hallmark of a strong and active ham radio club.

In that respect FLARC rose to the occasion.



For an interesting overview video, visit <https://www.supersciencesaturday.org/> and scroll down the page.



## Photos from Super Science Saturday

[photos tnx to WI2W & KD2SOG]



Dave WO2X waits for the action to start



Robert KD2SOG explains how an HT works, while dad is reading the literature on ham radio.



Jim W2KNG explains how an HT is used, while the laptop computer also draws attention

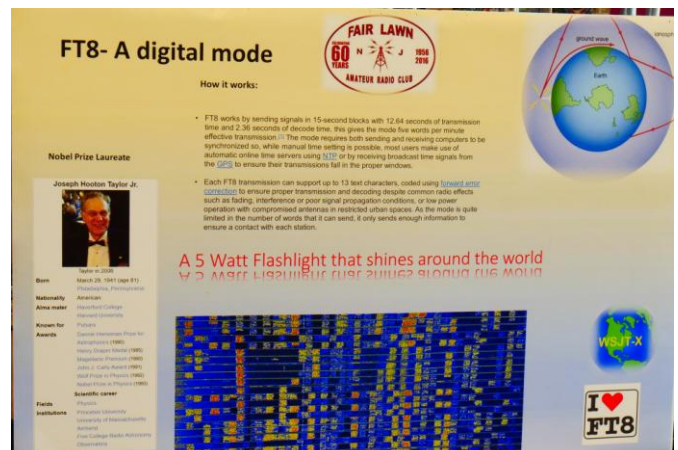


The whole FT8 demo display, showing decodes on the right-hand screen and PSKreporter on the left screen showing where we were receiving signals from.

At center, is Ham Clock showing the gray line and other interesting info.



Robert KD2SOG explaining FT8



Our poster describing the FT8 Digital Mode



## More Photos from Super Science Saturday



QSL cards from around the world,  
with a line to where each country is  
located on the map.



All hands in the drum,  
as dad enjoys watching



Where in the world did my QSL card come from?



Judith KC2LTM and Fred W2ABE  
ready to demonstrate "the secret code"



Fred W2ABE demonstrates Morse Code  
to student as mom looks on



Dave WO2X explains his remote FT8 setup  
to interested high schoolers



## Calling the Space Station



Steve WI2W, Carolyn KE2FIO and Raz KE2FEB attempting to contact the ISS during PopUp Tuesday on March 25. [photo by Karl W2KBF]

## 2025 Dues

New members: only \$20 for your first year !  
There are no changes to dues for the upcoming year.  
Renew now, and let us know what activities or features would make you more active with the club.

Please make checks payable to:  
"Fair Lawn Amateur Radio Club"  
and send them to:

Fair Lawn ARC  
– Attn: Treasurer  
10-10 20<sup>th</sup> Street  
Fair Lawn, NJ 07410

Please include a member application form with your \$25 check regardless of your member status.  
It can be found near the back of this newsletter.



## The Resonator Is Now Archived!

Ever wanted to search for something in *The Resonator*? Maybe a member profile. Perhaps a past Street Fair. Even who participated at Field Day in 2017.

Now you can. *The Resonator* has now been accepted as part of the Digital Library of Amateur Radio and Communications. DLARC is a project of the Internet Archive (the not-for-profit online library best known for *The Wayback Machine*.) DLARC is growing to be a massive online library of the past and present of ham radio and related communications. It is funded by a grant from Amateur Radio Digital Communications.

When you need to find something, go to:  
<https://archive.org/details/flarc-resonator>

You can use the search "text contents" field to do a full-text search on all issues or click "Date Published" to see them sorted by publication date.

You know our little newsletter is cool.  
Now a lot more hams around the world will as well.

## Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://apparel.FairLawnARC.org>  
<http://auction.FairLawnARC.org>  
<http://blog.FairLawnARC.org>  
<http://calendar.FairLawnARC.org>  
<http://events.FairLawnARC.org>  
<http://exams.FairLawnARC.org>  
<http://facebook.FairLawnARC.org>  
<http://news.FairLawnARC.org>  
<http://swap.FairLawnARC.org>  
<http://tech.FairLawnARC.org>  
<http://youtube.FairLawnARC.org>

<https://groups.io/g/FairLawnARC>



Steve WI2W, Raz KE2FEB, and Carolyn KE2FIO moments before they were abducted by aliens, never to be seen again. [photo by Karl W2KBF]



# The Fair Lawn Amateur Radio

Why is FLARC New Jersey's Most Exciting Radio Club?



## Annual and Special Events



- Field Day
- Winter Field Day
- World Amateur Radio Day
- Portable Day
- Earth and Environmental Days
- Field Trips
- Club Exchanges
- Special Even
- Public Service Activities
- Public Events
- Ham fests and Auctions
- Foxhunts
- Contests
- Youth Activities and more

## There Is Something Every Night At FLARC!

Monday: Near and Far Net

Tuesday: DMR Net and Open House at the clubhouse

Wednesday: ARES/RACES Net

Thursday: Tech Net

Friday: Open House at the clubhouse or *Kawfee Tawk* Speaker Series (Monthly via Zoom)

Weekends: Open House at the clubhouse, POTA and other station activations, Contests, Foxhunts



## Special Interest Groups

- Portable Ops (POTA, SOTA, etc.)
- DX: Chase the rare ones
- Digital Voice: DMR and other modes
- FT8: Plus, other WSJT modes
- Satellite: Also, for weather interests
- Monitoring: SWL and other listening
- Contesting
- EMCOMM
- Radio Direction Finding
- Raspberry pi, Arduino



## Plus:

- A five-position operating station clubhouse
- An active repeater—W2NPT linked with NJ2BS.
- New antennas on the roof
- Monthly VE testing
- An award-winning newsletter
- Monthly speaker programs
- Educational programs and activities
- Active in-person and social networking
- An extensive video education archive

## That is Why FLARC Is the Most Exciting Club Around!

Come join us in-person or via Zoom for more activities, speakers, and projects!

[www.fairlawnarc.org](http://www.fairlawnarc.org)



**The Club** Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night, except when there is a Business Meeting scheduled, from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

#### 2025 Officers, Committees and Assignments

President	Gene Ottenheimer	WO2W
Vice President	Nomar Vizcarrondo	NP4H
Treasurer	Robert Marchini	KD2SOG
Secretary	Jim Cooper	W2JC
Trustee	Judith Shaw	KC2LTM
Trustee	Lowell "Van" VantSlot	W2DLT
Trustee	Noel Pagan	W2MSA
Member Services	Judith Shaw	KC2LTM
Health & Welfare	Nomar Vizcarrondo	NP4H
Marketing	Jim Cooper	W2JC
Program	[open]	
Video/YouTube	Thom Guida	W2NZ
Social Media	Brian Duddy	N2BTD
	Thom Guida	W2NZ
	Dave Marotti	NK2Q
Photographer	Robert Marchini	KD2SOG
Community Relations	Gene Ottenheimer	WO2W
	Dave Gotlib	KD2MOB
Field Day2025	[open]	
Winter Field Day 2025	Noel Pagan	W2MSA
Hamfest	Gene Ottenheimer	WO2W
Auction	Brian Cirulnick	KD2KLN
Education	[open]	
Youth Outreach	Robert Marchini	KD2SOG
Adult Outreach	Lowell "Van" VantSlot	W2DLT
	Jim Cooper	W2JC
VE Testing Coordinator	Gene Ottenheimer	WO2W
Special Events	James Gallo	KB2FMH
Contests	Lowell Vant Slot	W2DLT
FLARC Historian	Fred Belghaus	KR2H [W2AAB]
Webmaster	Jim Cooper	W2JC
Associate Webmaster	David Kozinn	K2DBK
Technical Chair	Dave deCoons	WO2X
EmComm	Jim Breheny	N2JLF
RACES/ARES Director	Dave Gotlib	KD2MOB
RACES/ARES Liaison	Steve Wraga	WA2BYX
Newsletter Editor	Jim Jalil	W2KNG
Newsletter Publisher	Jim Cooper	W2JC
Club Station Manager	Noel Pagan	W2MSA
Quartermaster	Fred Wawra	W2ABE
W2NPT Trustee	Jim Cooper	W2JC
NK2H Trustee	Ed Efchak	WX2R

President serves as ex officio to all committees

## Want a Call Sign License Plate?

Amateur Radio (Ham operators) license plates may be purchased for a \$15 fee, for passenger vehicles, but not for commercial vehicles or motorcycles. (Applicants must be licensed by the Federal Communications Commission.)

Call MVC at 609.292.6500 or (toll free in NJ) 888.486.3339 to request an application.

The club has applications from time to time. If you would like an application, visit the "contact us" page, and we'll get one out to you.. Or find the form and detailed instructions at:

<https://www.state.nj.us/mvc/pdf/vehicles/SP-23.pdf>



## Letters:

### A feature of *The Resonator*

The editor has received a lot of nice notes, letters and comments about this newsletter and the club in general. We have not published them in the past but going forward we will at least try.

Here are the grounds rules:

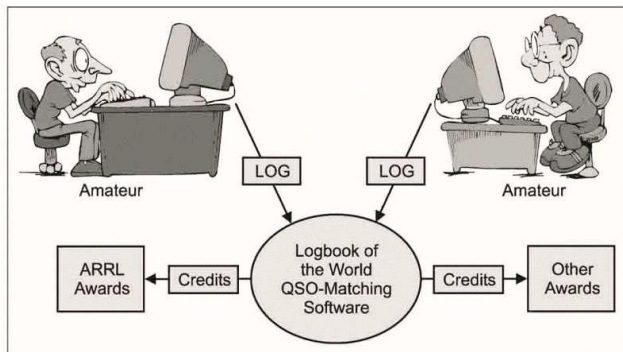
- Please keep all comments as brief and succinct as possible.
- No personal attacks.
- No political rants.
- No comments promoting violence, racism, religious intolerance, vulgarity, obscenity, or other such discourteous behavior.
- The Editor reserves the right to exclude any comments that violate our guidelines and may subject the writer to further disciplinary action by the club.

# A QSL card is the final courtesy of an amateur radio contact.

[https://en.wikipedia.org/wiki/QSL\\_card](https://en.wikipedia.org/wiki/QSL_card)

**INCOMING QSL Bureau** -- if you have been making on-the-air contacts, you might very well have a package of exciting QSL cards from around the world waiting for you at the incoming QSL Bureau. If you previously received cards from them, check to see if you have any “credits” left by going to [https://www.njdx.org/?page\\_id=869](https://www.njdx.org/?page_id=869) If you never contacted them, they probably have cards for you! Go to this page -- [https://www.njdx.org/?page\\_id=25](https://www.njdx.org/?page_id=25) and get some ‘credits’ to cover the postage for mailing your cards to you.

To learn about the W2 Bureau, [https://www.njdx.org/?page\\_id=30](https://www.njdx.org/?page_id=30)



Those who upload logs to Logbook of the World become eligible to redeem confirmation credits for awards. LoTW wants and needs *all* logs. Uploading is free, so send your logs today!

## NOTE:

LoTW is back on line and seems to be perking along just fine. Recent reports are that DXCC applications are being processed in three weeks or less now.

## Follow FLARC ON THE WEB

**Facebook:** <http://facebook.FairLawnARC.org>

**Twitter:** @FairLawnARC

**Youtube:** <http://youtube.FairLawnARC.org>

**Website:** <http://FairLawnARC.org>

## SIG Group Membership

Here is an update on the roster of Special Interest Groups... many groups have increased in size during the last month. About 45% of all members have joined at least one group.

<u>SIG Name</u>	<u>Leader</u>	<u>#</u>
Contesting	W2DLT	14
Digital Voice		30
EmComm	N2JLF	13
Monitoring	WX2R	25
DX	W2JC	18
FT8	W2JC	22
Satellites	N2AAM	20
Portable Ops	W2MSA	48
Radio Astronomy	WX2R	4
Raspberry pi		7
Direction Finding		6
FLARC General		174

Sign up for a group... or ...  
why not start one?

Contact [webmaster@FairLawnARC.org](mailto:webmaster@FairLawnARC.org)  
if you would like to start a new  
Special Interest Group.



# The Clubhouse Is Open Three Fridays In April!!

Date	Clubhouse Status
April 4	<b>CLOSED</b> – Business Meeting at Fair Lawn <b>Senior</b> Center
April 11	<b>OPEN</b>
April 18	<b>OPEN</b>
April 25	<b>OPEN</b>



## Pop-Up Tuesdays are now in-person at the club.

The club will follow all borough COVID-19 requirements for these events.



## Editor's Corner — by Jim Jalil W2KNG

With Spring comes warming temperatures, more hours of daylight and an urge to get out in the fresh air. For many hams this is a time for POTA and SOTA activations, all types of portable operation and serious planning for Field Day. This is also a time when hams begin to look up into the trees and over roofs for a reason near and dear to the heart of every ham... antennas.

Hams often spend many hours during the winter thinking about antenna projects and needed repairs and maintenance to existing antennas. This includes everything from thinking about a possible hex beam, to seeing if that dipole out in the yard could be just a little bit higher.

However at the risk of beating an old drum and kicking a poor dead horse, it is always a good idea to be reminded that safety comes first. Often when hams speak of safety they refer to working on radio equipment where high voltages are present. Of course that warning can never be repeated too often. But antenna safety is just as important, and if one would hazard a guess, more ham radio accidents and injuries are antenna related than high voltage related.

It has been said often before, even in this column, but it bears repeating. Hams should never attempt any antenna project, even seemingly small ones, alone. This may be turning out to be an annual Spring reminder, but just as any good boy scout or girl scout knows you should never go swimming alone (known as the buddy system) so too no ham should ever attempt an antenna project, no matter how small, alone. The buddy system is alive and well in amateur radio.

There are no lone ranger hams, or at least there shouldn't be. Here at the Fair Lawn Amateur Radio Club we are fortunate to have a membership ready, willing and available to assist in any project. Even if one of us is just pulling down a dipole for minor repairs or trimming, it is always a good idea to have a fellow ham with you... just in case. A more involved antenna project is more than a "just in case" – it is a necessity. Every serious antenna project should have a fellow ham, even perhaps more than one, on site.

Never be hesitant to ask. Every ham, every single ham, has had to put up an antenna at some point, so asking for antenna assistance is nothing new or surprising to any amateur radio operator. We've all been there.

When it comes to any antenna project, at no cost (well maybe the cost of a six pack and a pepperoni pizza) any member of FLARC can tap into invaluable years of ham radio and antenna raising experience and several pairs of helping hands. At least you'll have plenty of company and camaraderie when working on your antenna project and if – heaven forbid – a slip, a fall, or a branch come crashing down, you will not be alone.

Those are the times a fellow ham is more than just a pleasure to be around; a fellow ham is a safety net we all should have.

---

Publisher's Note: From experience, I can tell you that when you are on the ground unconscious with no "fellow ham" present, YOU cannot call 911 nor can you tell how many hours you might be on the ground "damaged" before someone finds you and calls for medical attention. – W2JC



## Vast Archive of FLARC Activities and Info

Members are reminded that we have a large archive of YouTube videos of our previous many years of Kawfee Tawk™ presentations, which cover many aspects of ham radio. Our mostly unsung hero club videographer, Thom W2NZ, has spent thousands of hours of his own time creating really professional quality videos of these 167 presentations. Visit our club YouTube page and you will see all of them listed on the main page, at

<http://youtube.FairLawnARC.org>

Another large and rather unused archive is that of our seven years of the club newsletter, The Resonator. They provide a nice historical record of the many activities of FLARC over the years, as well as lots of useful info about ham radio and electronics. The entire archive is at

<http://newsletters.FairLawnARC.org>

And don't forget the FILES area of our groups.io website, where useful and important info is saved:

<https://fairlawnarc.groups.io/g/main/files>

## Renew Your ARRL Dues... Send Free Money to FLARC!

The ARRL has a great program to support affiliated clubs in that it sends part of your dues back to the club if you renew through the club.

So... when you get your ARRL renewal, send both your check and your renewal application to our trusty Treasurer, who will take care of getting your renewal to Newington and a fat check for \$5.00 back to FLARC.

Nothing can be simpler...  
you just have to remember!!

Print and use the  
form on page 30  
of this issue of  
The Resonator



## Club Apparel — Get Them While They're **RED**!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.

Go to [www.hamthreads.com](http://www.hamthreads.com)

or visit <http://apparel.FairLawnARC.org>

Check out the item selection that is posted on the **FLARC website (with pictures and prices)**. Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



It's easy to spot FLARC members  
wearing their red club shirts !

## Ham Radio Is Contagious And It Won't Make You Sick!!

### 2024 FLARC Net On The W2NPT Repeater:

*Near and Far Net • Mondays at 8PM*

*W2NPT Repeater and EchoLink*



**Special Note:** As non-profit, the IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby.



**NEWHAMS.INFO**

Training, information, and encouragement for new amateur radio operators.

<https://newhams.info/>

#### BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such a gift is worthy.

## About The Club

*The Resonator* is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday, except when a Business Meeting is scheduled, at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM at the Fair Lawn Senior Center, and on Zoom.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL 167.9) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has nearly two hundred paid members.  
Dues are currently \$25 per year;  
\$20 for new members.

For more information, please see our website, at  
<http://membership.FairLawnARC.org>

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Thanks!  
for your  
Support!!

**This is YOUR club.... Be a part of it !!**



**FAIR LAWN'S  
COMMUNICATIONS CENTER!**

***With Our Antennas On The Roof!***



## Around the Shack

— by Hal Kennedy N4GG

### Georg Ohm's Law

As with ham radio in general, this column has readers at all levels of technical expertise. Ohm's law might seem basic to many, but to others it's seldom used and in the category of "once learned then forgotten." As a practicing EE, Ohm's law is second nature to me. It's one of the lenses through which I view the everyday world. I can't see a transceiver, or a power supply, or an antenna, or power lines, or a toaster without thinking about how many amps, volts and/or watts are involved.

Meanwhile, most of us are not EEs. The good news is we don't have to be to enjoy ham radio. Far from it! In this column, in my book and in my presentations I've shared my belief that very little math is required to enjoy ham radio. You don't need an engineering degree to be a happy, successful ham. Actually, you don't need any math skills at all. But, a little knowledge is a good thing. Were I asked to name one technical concept I suggest every ham know and know well, I'd answer **Ohm's law:  $E = I \cdot R$** . The various permutations of Ohm's Law can all be handled with a four-function calculator.

So, let's take a look at Ohm's law, beginning with a brief history.

Before Georg Ohm began laying the foundation for the monthly electric bill there was Henry Cavendish (1731-1810). A shy and reclusive man, Cavendish was a prolific inventor and discoverer of, well, of things. What things? For starters, he discovered hydrogen. He figured out the composition of the earth's atmosphere. He discovered the composition of water -  $H_2O$ . He also, using what can only be described as crude methods, determined the density of the earth. His value was 5.448 times the density of water. That number, determined in 1798, is within 1% of the number we use today. From that he determined the mass of the earth and the universal gravitational constant, "G." In his day, Cavendish was referred to as "the man who weighed the earth." Cavendish was a bright fellow!

Regretfully, Cavendish's shy nature kept him from receiving the recognition he deserved. He never published a book and seldom published papers. The bulk of his papers were published in 1879, a century after they were written. Many scientific breakthroughs credited to others had to be re-attributed to Cavendish

— he had been first.

Examples of this include Dalton's Law (partial pressure of gasses), Charles' Law (expansion of gases as a function of temperature) and, you guessed it, Ohm's Law. Note that to this day none of these are called "Cavendish's Law," although by all rights they should be.

I recommend reading the Wikipedia and Encyclopedia Britannica entries for Henry Cavendish if you get a moment. He was one of the greatest and at the same time least recognized scientists of the 18th century.

Cavendish's experiments covered chemistry, thermodynamics, optics and many of the branches of physics including what would become known as electricity. Electricity was an unexplained phenomenon when Cavendish turned to figuring out what it was and how it worked.

Cavendish was aware that voltaic piles could be constructed to build a "pressure" of sorts (now called potential, measured in volts). He was also aware that static electricity pressure could be stored in a Leyden jar (the first capacitor – the Leyden jar – was invented in 1745). Through experimentation Cavendish became aware that pressure had no "velocity" (current) when trying to charge a Leyden jar if the circuit included pure water, but the charge did have velocity through salt water. Empiricist that he was he set about trying to find the relationship between pressure (voltage), velocity (current) and the inhibiting nature (resistance) of water. But how? There wasn't much electrical apparatus in 1780.

Cavendish used the best voltmeter and ammeter he could conjure up – himself. Like Ben Franklin flying kites in thunderstorms, Cavendish somehow survived his experiments.

Dutifully recording how powerful the shocks were from discharging Leyden jars through his body he worked out Ohm's law, oops, make that Cavendish's law. Henry Cavendish determined the "velocity" (current) of electricity is directly proportional to the pressure (voltage) and inversely proportional to resistance. The less resistance, the bigger the shock. That work was completed and recorded in notebooks in 1781.

Georg Ohm published the seminal book *The Galvanic Circuit Investigated Mathematically* in 1827, where the properties that became known as "Ohm's Law" were described – 46 years after Cavendish had it figured out, written down, and... not published. Oh well.

Continued on next page.

## Around the Shack, Continued

The one positive thing I can say about Ohm getting credit is his name is monosyllabic and short, and makes for easy use of the Greek letter Omega for resistance  $\Omega$  - in Ohms. Measuring resistance in "Cavendishs" wouldn't be as nice.

Had enough history? Let's move to using Ohm's law. Every ham should know  $E = I \cdot R$  and what it means – my opinion. Why? Because it explains so much of what's happening in our radios and antennas.

Figure 1 shows the mnemonic many of us have used to learn Ohm's Law. If you can't remember Ohm's Law, the mnemonic let's you quickly find the version of the formula you need. Simply hold your finger over the item you wish to calculate. Cover V (V and E are used interchangeably) and you are left with  $I \cdot R$ . Cover R and you see it equals  $V/I$ .

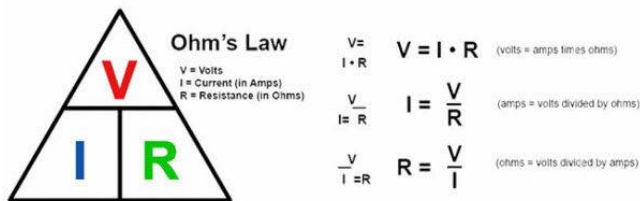


Figure 1. An easy mnemonic for using Ohm's Law

Figure 2 adds in the formulas for power, the most basic of which is  $P$  (in watts) =  $I \cdot V$ .

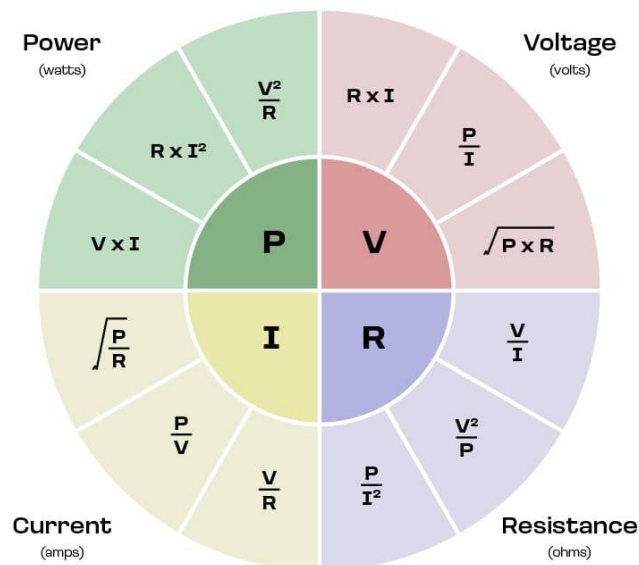


Figure 2. Ohm's law including power calculations

Here's a challenge: Look around you right now and find at least one use for Ohm's law.

Here are a two of mine:

**Example 1:** I've been wondering what it costs to keep my receiver on vs. turning it off when I leave the room. I've been rigorous about turning things off when not in use; but that adds wear and tear to switches and components. Maybe I'd be better off leaving some things turned on?

The ammeter in my 13.8 VDC power supply tells me my FTdx10 transceiver draws 2 amps on receive. Two amps times 13.8 VDC = 27.6 watts. The power supply I use is about 60% efficient, so the power supplied from my wall outlet is 27.6 watts divided by 0.6 or 46 watts. During a typical day I might be on the air at any time over about a 10 hour period. If I left the radio on for 10 hours I would use 460 watt-hours (46 watts for 10 hours) or 0.46 kilowatt-hours. I pay my power company, Cobb EMC, 8.25 cents per kilowatt-hour.

0.46 KWh times 8.25 cents equals 3.8 cents. It costs me 3.8 cents to leave my receiver on during a 10-hour day or about a third of a penny per hour. That's not much. It will cost \$1.14 a month if I do it every day. Maybe I shouldn't be turning the rig off every time I walk away for a while.

**Example 2:** Transceivers sometimes work when receiving, and then misbehave when attempting to transmit. The misbehavior can manifest itself as indicator lights and/or displays going dim, relays chattering, little or no RF output and/or the radio looping through endless resets. I've seen this many times. It comes up for discussion nearly every day on social media sites dedicated to one transceiver or another. The cause is almost always excessive voltage drop between the power supply and the radio when transmitting.

A 100 watt radio draws about 22 amps at 13.8 VDC when transmitting at full power. If the resistance of the wire and connections from the power supply to the radio is just 0.1 ohm, and that's not much, the voltage drop is 22 amps times 0.1 ohm, or 2.2 volts!

In this example you may have 13.8 VDC at the power supply, but you will have 11.6 VDC at the radio. Most manufacturers do not publish a lower threshold for supply voltage, but it's typically around 11 VDC. Below 11 VDC radios do not reliably transmit. On receive there's seldom a problem; the radio only presents a load of one or two amps. On transmit, ohm's law tells us any resistance in the power supply leads above around 0.1 ohm will be problematic.

Continued on next page.



## Around the Shack, Continued

I'll summarize the March 2020 Around the Shack column "*Station Un-Design Tips*" here; but I encourage everyone to read that column. It can be found in the on-line archives of every newsletter that carries this column and it's Chapter 27 of my book *Ham Radio Tips and Tales*. In that column I encouraged readers to cast a jaundiced eye on DC power distribution boxes. These are sold as "power hubs," "power distributors," "DC outlet panels" or sometimes with vendor-specific names such as West Mountain Radio's "RigRunner" series (clever name). They come in a variety of sizes and from a large number of vendors. They typically use Anderson Powerpole connectors.

Figure 3 shows an example.



Figure 3. A typical DC power distribution box of questionable utility for 100 watt radios

Think through the current flow through one of these distribution boxes. Current enters through a duplex Anderson Powerpole connector. Internally that connector is wired to a fuse holder which has the main fuse plugged in. Further wiring routes the current to a branch-fuse holder with a branch-fuse plugged in. On it goes from there to another Anderson Powerpole connector before leaving the box. Is all that less than 0.1 ohms?

What do you think?

Not sure? Think about how fuses work. They are made to be resistive, where the power dissipated in the fuse (Ohm's law,  $P = I^2 \cdot R$ ) melts it open at the desired trip-point. There are always two fuses in line, the main fuse and the branch-circuit fuse. At 22 amps there is enough voltage drop across just the fuses to make some 100 watt transmitters malfunction.

There are additional considerations too, such as your power source might be less than 13.8 VDC, your particular rig may stop working at some voltage above 11 VDC and some allowance needs to be made for the voltage drop across the wire from the power source to the distribution box and the wire from that box to the radio.

You can guess my recommendation concerning supplying power to 100 watt transceivers via fused DC power distribution boxes – don't do it!

Back to my challenge - are you stuck for something to calculate using Ohm's law? Here, try this:

End-fed half-wave (EFHW) antennas have become very popular. At the feed point, these have a 49:1 transformer that converts the 50 ohm input to  $49 \times 50 = 2,450$  ohms, which is the nominal impedance of the radiating wire. For 100 watts at the 50 ohm input, what's the current and what's the voltage?

Now, how about for 1,500 watts? Now do it again for the 2,450 ohm side of the matching transformer. Are you surprised at the numbers?

If you did it correctly, 1,500 watts delivered into 2,450 ohms is 0.78 amps and 1,917 volts, average! The peaks are 1.4 times those numbers or 1.13 amps and 2,700 volts. Look at the insulator feeding the antenna wire on an EFHW transformer box. Does that insulator look okay for 2,700 volts of RF? Under snow? In the rain? Remember also that RF is more prone to arc and cause issues than 60 Hz AC. Can you set the woods on fire this way?

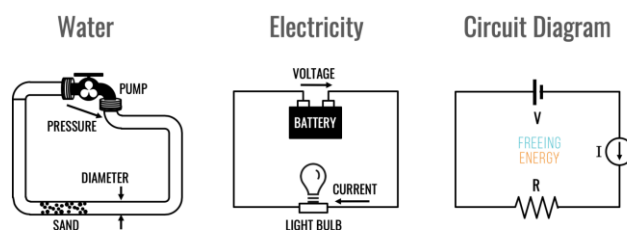
I hope this gets you thinking about applying a modicum of math – just four-function calculator level math – to your everyday ham experiences. The best use of math there is, is Ohm's Law (with due respect to Mr. Cavendish).

73, Hal N4GG

### Electricity is like a water hose

Voltage	Volts (V)	
Current	Amps (A or I)	
Resistance	Ohms (R or Ω)	

$$\text{Voltage} = \text{Current} \times \text{Resistance} \\ (V = I \cdot R)$$

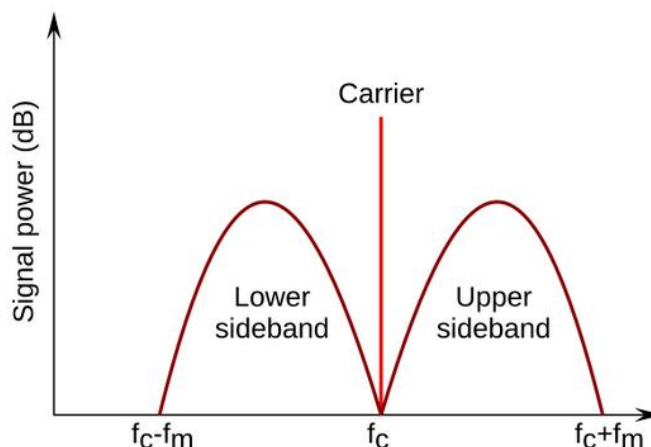


## Theoretics Demystified

This time we will digress a bit and look a bit closer at the evolution of single sideband.

To reiterate, in radio, side bands occur when you have a carrier and add voice [modulate] the carrier. What you end up with is the carrier and the audio bandwidth added to the carrier, the upper sideband, the sum of both and the lower sideband, the difference between the two. The drawing below explains this. In our modern radios, we use either the lower or upper sideband. When transmitted, only one of the sidebands and not the carrier is used, which means that we can cover much greater distances with much less power.

Below  $f_c$ =carrier and  $f_m$ =the modulating signal.



Now that we know what and how SINGLE sidebands are used, we need to see how they are decoded in receiving. To detect the audio signal the carrier must be put back to rebuild the signal that was there before it was taken out. This is done with a local oscillator which adds back a carrier so that the signal can be detected. Note that only ONE of the sidebands is needed for this.

What we end up with is the original modulating signal contained in one of the SIDE-BANDS plus the carrier which is then detected/demodulated using diode rectification.

As an aside, SSB [single sideband] was not put into use until the modulation part was perfected. Initially it was achieved using a non-linear mixer

but there were many problems, and it was only useable on one frequency since heavy filtering was involved. Next two balanced modulators were used with one phase shifting one of the sidebands, but it was when the use of a wideband phase shifting network was developed that SSB became practical and much more so with the advent of solid state and integrated circuits.

As hams we use SSB whenever we are on HF unless we are going with AM or using code, not to mention digital modes which we will get into next month.

Fred Wawra, W2ABE, 73.

## HAMSPEAK

### UNBALANCED [mixer] MODULATOR:

A method of modulation where the output contains the modulating signal and the carrier and the desired modulating signal.

### SINGLE BALANCED [mixer] MODULATOR:

The method where the output contains EITHER the carrier OR the modulating signal along with the desired output and the undesired signal is suppressed.

### DOUBLE BALANCED [mixer] MODULATOR:

In this circuit BOTH the carrier AND the modulating signals are suppressed at the output.

### HETERODYNING:

This describes what happens when two different frequency signals are mixed. The resulting mixed output is the original frequency and the difference between it and the second frequency [called the lower sideband] and the sum of the two which is the upper sideband. IE: 1 kHz mixed with 50 Hz, gives 1050 kHz and 950 Hz.

See Theoretics this month for more information and explanation and a bit of sideband history.

Fred Wawra, W2ABE, 73.

[Any questions on the above should directed to the author.]

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## Skycraft Surplus – a parts heaven!

There is a wonderful surplus store, reminiscence of Radio Row in NYC. It's near Orlando, Florida and does mail order. This is NOT a commercial for Skycraft, but rather a visit to long forgotten places like TAB (That's A Buy) on Radio Row in NYC during the 50s and 60s and Vetsalco in Paterson, or even NRM in Paterson, NJ which I visited often by bicycle from Fair Lawn, before I could drive.

The difference is how Skycraft has EVERYTHING arranged so neatly in row after row; each bin labeled with the values contained within. A monumental task in and of itself.



Skycraft is a unique place to visit - it's like a museum, surplus parts store and a NEATLY arranged mail order parts business. A must-see when you visit Hamcation and/or Orlando in the future.



— Reported by Van W2DLT

## FLARC February 18, 2025 VE Testing Results

With VE testing back on schedule,  
Gene W02W reports the following results:

Name	Call	License Earned
Daniel Auclair	KE2FJD	Technician
William Kelly	KE2FJF	Technician
Carolyn Pontoriero	KE2FIO	Technician

Testing for next month will be at the  
Fair Lawn Recreation Center.

## Eleven Special Interest Groups [SIGs] Already Formed: Any Others?

Club interest continues to grow in the SIGs.

Another recently formed SIG is for those interested in Raspberry Pi and Arduino projects, but now includes DoItYourself (DIY)/Makers kit building, 3D printing and similar topics.

A list of all of the current SIGs is shown on page 14.

Other possible groups, from the member survey, include:

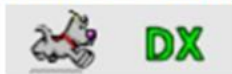
- *Radio Propagation*
- *Antennas and how they work*
- *Ham radio software*
- *Technical assistance to club members*

Anyone interested in leading any of these groups...?

Please contact [webmaster@FairLawnARC.org](mailto:webmaster@FairLawnARC.org)



## DX Special Interest Group Update



### Ireland On The Air

Back in December my friends and I planned a 2 week trip to Ireland for February. So naturally one of the first things I thought of, other than rushing to get a passport, was radio. I had posted in the Ham Radio Ireland Facebook group asking for any pointers from our Irish counterparts and they were very helpful. As far as operating there, all we need as US citizens and licensees is proof of US citizenship (aka your passport), a copy of your official FCC license (not reference copy), and a copy of FCC Public Notice DA 16-1048.

You need to be an Extra Class operator, although some CEPT countries do allow General Class license holders to operate. More info can be found at [arrrl.org/cept](http://arrrl.org/cept)

Ok, now on to the radio part. I brought with me my Icom IC-7000, as its size and 100W power lent well to packing. I brought a 7.2Ah LiFePO lithium battery. TSA and the airlines want your battery to be less than 100Wh each. A 12Ah is 144Wh so leave that home!

I borrowed from Lou K2TAC his Ham Radio Dude *Lil Dude 6* mast which I used to hoist a 29 foot random wire fed from an LDG 9:1 and my Wolf River Coil vertical. I also had my LDG Z-100A tuner. Aside from the other standard bits and pieces I had a few HTs with me — with EVERY 2M and 70cm repeater in the Republic programmed in.

While in Dublin I made contact on one of the local repeaters. The lads there were nothing short of welcoming and remembered my post in the Facebook group. After being a bit of a tourist in Dublin, we went off to the western side of the island. Staying in Clifden, which is located in the very scenic Connemara region, I first setup my equipment at the Airbnb. I made a few contacts there but the real fun was setting up and activating from a few parks.

The first park was Connemara National Park IE-0004 with 14 SSB contacts as EI/KE2NJ.

A few days later we went to the Aran Islands, specifically Inishmore, where just about half the island is part of the nature reserve. There I activated Inishmore Island Natura 2000 IE-0169 as EJ/KE2NJ with 14 SSB contacts.



In case you're wondering why I was both EI/ and EJ/ good question. For some reason Ireland uses EJ calls for offshore islands while EI is for the mainland.

Nevertheless it was a chilly and windy activation with my wire antenna taking form as everything from a sloper to inverted X, Y, and Z. While killing time at a pub waiting for the ferry, I turned on my HT and was hearing a repeater out of Cork, which is tied to the Southern Ireland Repeater Group. To my surprise I was able to hit the repeater and had a nice QSO with Hugh EI2HI, whom I spoke with earlier via Facebook & the repeater network over Zelle & Echolink.

Up until this point both parks I activated had been activated already, albeit very rarely. Well, for the next park **I was the first ever activator.**

Continued on next page.

The remnants of a castle dating to the 16th Century, Merlin Castle on the outskirts of Galway, the park is Merlin Woods IE-0201. There I set up adjacent to the castle with my mast and wire and netted yet again 14 contacts. A picture from this activation earned its place on my QSL card for this trip.



My last activation was another ATNO at Ballyteigue Nature Reserve IE-0073 on the outskirts of Lisdoonvarna, where I broke with tradition and got 23 contacts.



While staying in Doolin at the end of the trip I was also setup from the Airbnb and made some EU contacts on SSB but I also fired up the laptop and got some FT8/4 contacts back home earning a few FLARC members QSL cards.

Being able to bring my equipment to Ireland and operate even a little bit while on my trip was absolutely amazing. Even better was being able to activate 4 POTA parks, 2 of which I was the first activator ever.

Stay tuned as we already have plans to go back February of 2026.

PS - The Guinness does taste better over there!

Sláinte,

Chris EI/KE2NJ

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Thinking of operating abroad ? Every ham knows that he or she cannot just enter a foreign country and operate. Each country has its own licensing requirements and “reciprocal” licensing standards. Depending on where you are traveling you should research the CEPT (European Conference of Postal and Telecommunications Administrations), the IARP (International Amateur Radio Permit) and look for Bilateral Agreements (that is a specific agreement between two countries, for example there is a Bilateral Agreement between the United States and Canada allowing for very broad reciprocal privileges).

Every ham considering operating abroad should do some basic research on what would be necessary for a licensed American amateur radio operator to operate legally in that jurisdiction. The ARRL is a good resource of information. Another way to get good information is to call a country’s consulate here in the United States. We are fortunate that a vast number of foreign countries have consul offices here in New York, but a quick Google search can help you find a consulate for any country in the world here in the United States.

Once you contact the consular office it may take a bit of explaining (or perhaps you might not be the first ham to inquire), but keep in mind the purpose of any consulate office is to provide exactly the kind of information a traveler to that country may need, and that includes hams.

Be prepared, have the necessary paperwork all in order and enjoy being some DX for a change.

— Jim Jalil



**Sunday Morning Breakfast Club**  
9AM-12PM

2M SSB net starts 9:30AM

Learn how to operate our club stations  
and the logging software ...

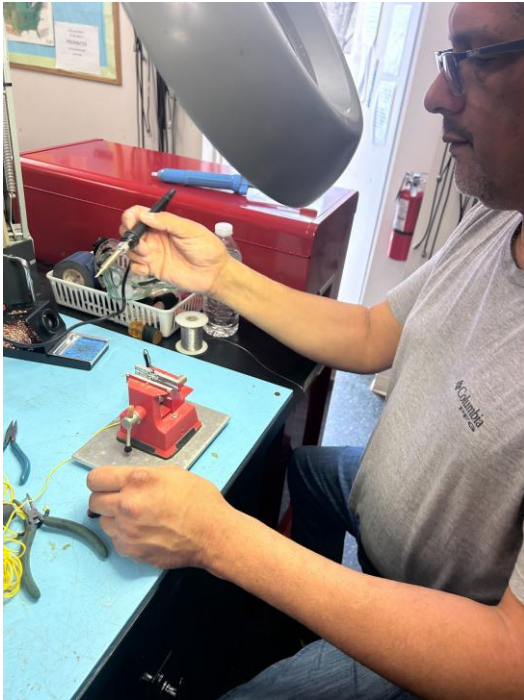
What project are you going to bring ?



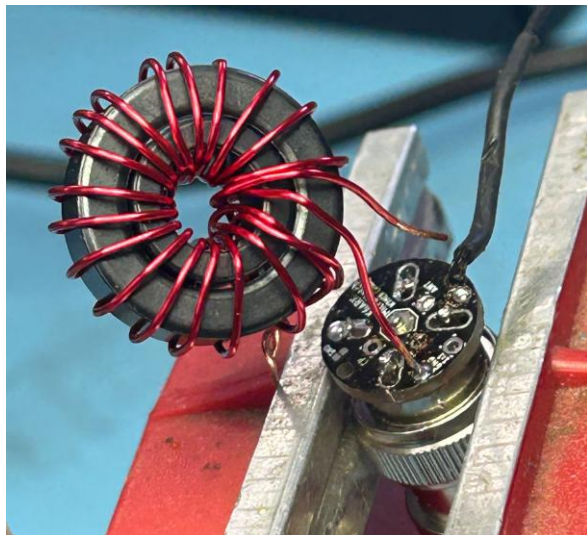
**Sunday, March 30<sup>th</sup>**

Ever wonder what goes on at the club during the  
Sunday Morning Breakfast Club?

Mike KD2YEW turned 'spy' and got us some photos...



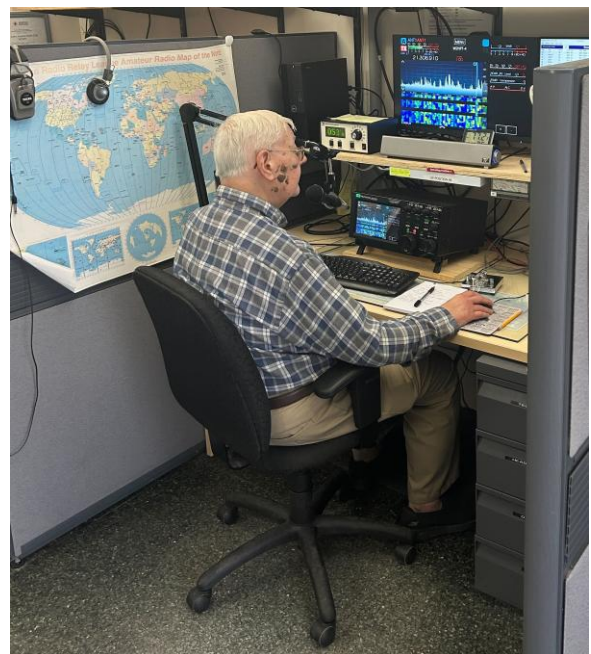
Noel W2MSA was helping Mike KD2YEW build a matching  
circuit for an efbw



Couldn't see what's in the vice?  
Here's a close-up of the toroid transformer  
being soldered to the cable connector.



Steve W12W was helping Jim N2JLF  
fix his Icom microphone



Fred KR2H works the WPX Contest  
at operating position #4



Nomar NP4H checks spots  
at operating position #3



## Contest Corner

Reported by Fred KR2H



### NEW JERSEY QSO PARTY 2024 RESULTS

Results have been published for the 2024 New Jersey QSO Party. FLARC's total score was 73,992 points.

FLARC came in at 6th place among participating clubs in New Jersey. Only 2 entries from FLARC were received by the QSO Party sponsors.

K2F was the FLARC Special Event Station established for the Fair Lawn Centennial Celebration. Under the call K2F 36,456 points were earned. The station was operated from home by Fred KR2H and the operation took 1<sup>st</sup> Place in Bergen County. [See winning certificate in the adjacent column]. The 1st Place certificate will be framed and hung in one of the FLARC club rooms.

K2ZC, also a FLARC member, earned 37,536 points and took 1st Place in Passaic County. Unfortunately, the QSO Party Sponsor didn't list Dave's score as being applied to the FLARC total, but by simple math, it's clear that he was the second member to submit a log for the club, and his submitted log must have credited FLARC. Thank you, Dave!

We still have a long way to go before taking the top spot in New Jersey. The winning club was the South Jersey DX Association (SJDXA), with a total club score of 275,524 points with only 9 entries.

The 2025 New Jersey QSO Party is scheduled for September 20th. With more than 100 members, we can do a lot better this year by having greater participation. Remember, even if you can't get to the club rooms in person to share the fun of "club participation" you can still participate from your home station and "attribute" your score to FLARC. Let's show our support for our club and our state, and resolve to take part in the 2025 New Jersey QSO Party, and adding our scores to the FLARC total!

73, Fred KR2H

2024 - NJ QSO Party Club Scores <span>Rev1</span>			
Club	Score	#entrys	
SJDXA	275524	9	1st Award for Club
DVRA	163162	7	
NPARC	120270	7	
FRC	111574	7	
SJRA	84250	4	
(Fair Lawn ARC)	73992	2	
BCRC	55152	2	
RLMS97	New mail New Mail Folder 5 new	1	
WBWPXCC	35910	1	



### The 2025 NJ QSO Party (NJQP)

Mark your calendars for the New Jersey QSO Party, an exciting on-air event hosted by the Burlington County Radio Club! The contest will offer amateur radio operators a thrilling opportunity to showcase their skills.

#### Event Details:

- **Date:** Saturday September 20th 2025
- **Start Time:** 10:00 AM NJ Local Time (1400 UTC)
- **End Time:** 10:00 PM NJ Local Time (0200 UTC on Sunday Sept. 21nd)

We have lots of time to plan for club participation in this decades-old contest, but mark your calendar now and before September drop by the club station on a Tuesday or Friday evening or a Sunday morning and get acquainted with the equipment and setups at our FIVE operating stations (or even just one, since you can only operate one at a time!).

And let Van W2DLT [vantslotl@gmail.com](mailto:vantslotl@gmail.com) know of your interest so he can be sure you get a chance to operate.



## ELECTRONIC DUES PAYMENTS ARE NOW AVAILABLE!



**FLARC dues, new and renewal — and even donations! —  
can now be made on-line ...**

Until permanent arrangements can be made, several fiduciaries of the Fair Lawn Amateur Radio Club have graciously agreed to forward electronic payments to the Club's bank account. Payments can be made using Zelle account.



- Log into your Zelle account
- Use the following phone number as the recipient: 201-240-9317
- In the notes section, include your Call Sign and what year(s) the dues are for

Once complete, you may – for added assurance - send a screenshot to [treasurer@FairLawnARC.org](mailto:treasurer@FairLawnARC.org)

– please be sure to redact any personal information –  
(e.g. bank account number, balance, etc.)

**For both new and renewal, please complete the Membership Application form at**

**<https://FairLawnARC.com/membership.pdf>**

with your current info and either give it to a club officer  
or mail it to the address on the form.

For additional information on club membership, visit

<http://membership.FairLawnARC.org>

Visit the club website at <http://FairLawnARC.org> for info about the club,  
club activities, club history and our club 2-meter repeater.

For a PDF form that can be filled in on-line, then printed and mailed with check, [CLICK HERE](#)

Or you can print this page, fill it in and mail to the address shown at the bottom.



## Fair Lawn Amateur Radio Club

*Fair Lawn Recreation and Community Center  
10-10 20th Street  
Fair Lawn, N.J. 07410*

### MEMBERSHIP/RENEWAL FORM

Name \_\_\_\_\_ Call \_\_\_\_\_  
Address \_\_\_\_\_ PO Box \_\_\_\_\_ Ste./Apt # \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Roster Published Phone # \_\_\_\_\_ Unpublished Phone # \_\_\_\_\_  
Roster Published EMAIL \_\_\_\_\_ License class: \_\_\_\_\_

Check all that apply      ARRL Member ?      RACES Member ?      ARES Member ?      CERT ?      VE ?

Additional Family Members (In same household) --

Name \_\_\_\_\_ Call \_\_\_\_\_

Name \_\_\_\_\_ Call \_\_\_\_\_

Introductory and Student Membership      \$ 20      \$ \_\_\_\_\_  
(Students under the age of 18 eligible for student membership)  
(Introductory membership open to new members  
or not a member in last 7 yrs)

Associate Membership \*      (No Fee)

\* Open to Fair Lawn Residents Only. No voting rights or other privileges.

Renewal of Current Membership      \$ 25      \$ \_\_\_\_\_

Three Year Renewal Incentive      \$ 65      \$ \_\_\_\_\_

(Single memberships only, family memberships excluded)

Additional Family Members    # \_\_\_\_\_ at      \$ 5 each      \$ \_\_\_\_\_

Life Membership      \$ 625      \$ \_\_\_\_\_

Senior Life Membership (65 yrs. of age or over)      \$ 250      \$ \_\_\_\_\_

Equipment Fund Donation, above regular membership dues      \$ \_\_\_\_\_

Total submitted      \$ \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

I hereby acknowledge the By laws and rules and regulations of the club and will abide by them as amended

Please Note: Memberships are NOT Pro-Rated. Membership is from Jan 1<sup>st</sup> to Dec. 31<sup>st</sup> of any given year unless documented otherwise.

Please make your dues check payable to the "Fair Lawn Amateur Radio Club" and remit to the following address:

**Fair Lawn ARC  
– Attn: Treasurer  
10-10 20<sup>th</sup> Street  
Fair Lawn, NJ 07410**



Complete this form for NEW or RENEWAL of ARRL membership  
and give to FLARC Treasurer [David Gotlib KD2MOB] with your payment check.



**ARRL**  
The National Association for  
Amateur Radio®

## Membership Application

☐ New    ☐ Renew    ☐ Previous Member    ☐ Unlicensed

Name \_\_\_\_\_ Call Sign \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Email \_\_\_\_\_ Phone \_\_\_\_\_

Date of Birth \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**My Family Member is Joining or Renewing: (\$12 per member)**

Name \_\_\_\_\_ Call Sign \_\_\_\_\_

Name \_\_\_\_\_ Call Sign \_\_\_\_\_

☐ Please note my new address    ☐ I do not want my name and address made available for non-ARRL related mailings

### Your Annual Membership Dues\*

Circle Your Choice (rates effective Jan. 1, 2024)

	1 Year	3 Years
Standard membership	\$59	\$174
Family (same membership exp. date and address)	\$12	\$36
Student (must be under age 26)	\$30	
Blind (requires one-time statement of legal blindness)	\$12	\$36

### Add-on ARRL Subscriptions

**QST**, ARRL's membership journal for active radio amateurs.

☐ 1 Year \$25\*    ☐ 3 Years \$75\*

**On the Air**, For beginner-to-intermediate-level radio amateurs.

☐ 1 Year \$25\*    ☐ 3 Years \$75\*

### Member Benefits

Your membership supports benefits, services, and programs that keep you active and on the air.

#### Membership Includes:

- Access to four digital magazines and archives (*QST*, *On the Air*, *QEX*, & *NCJ*)
- Unlimited courses through the ARRL Learning Center ([learn.arrl.org](http://learn.arrl.org))
- Logbook of The World®, contests, and award programs

...and more!

\*A print subscription for *QST* and/or *On the Air* requires an ARRL membership. Dues and subscription rates are subject to change without notice and are non-refundable

### Payment Information

\$ \_\_\_\_\_ Total Charge to:    ☐ Visa    ☐ MasterCard    ☐ AmEx    ☐ Discover    ☐ Check Enclosed

Card Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Card Holder's Signature \_\_\_\_\_

Toll Free (US) 1-888-277-5289 or 860-594-0200 • ARRL, 225 Main St., Newington, CT 06111-1400  
membership@arrl.org • [www.arrl.org/join](http://www.arrl.org/join)

CLUB  
form rev 1/24

**April 2025**

**FLARC Business Meeting**

FAIR LAWN AMATEUR RADIO CLUB  
MINUTES of BUSINESS MEETING  
Fair Lawn Senior Center  
April 4, 2025

Zoom setup at the meeting had no technical problems again this month!  
Thanks to W02X for getting everything working tip-top.

The meeting was preceded by a talk by Gene K2KJI to introduce us to the Scranton University Amateur Radio Club and their “super station” W3USR – to which a FLARC Field Trip is planned on April 24, 2025. Gene K2KJI was quite involved in the planning and setting up of the W3USR station. He indicated that they had received a \$200,000 grant from the Amateur Radio Digital Communications (ARDC) group, as well as a smaller grant from the National Science Foundation. These grants were made on the premise that the station would be instrumental in the many propagation and space weather experiments that are run by HamSci, the Ham Radio Science Citizens Investigation Organization. DXEngineering supplied much of the hardware, including the Icom 7610.

W3USR has a “world class antenna” which is a Log Perodic that basically works from 10MHz through 6 meters with a low and flat SWR! The station runs a KW into that steerable antenna, so they are heard well around the world. There is also a 440MHz repeater on the roof, which is used for OEM activities as well as general amateur use.

Gene described the W3USR station as being on the 5<sup>th</sup> floor, with large windows that give you a beautiful vantage point to see all of the campus and the adjoining metropolitan area of Scranton, and beyond. The mission of W3USR is to perform propagation studies on most of the Ham HF Bands and conduct RF experiments and gather scientific data to advance the state of the art in Earth Sciences and Space Weather. Another goal is to encourage students in engineering and other sciences. Gene again emphasized that it is well worth the trip to see the station, and the FLARC Field Trip folks have been invited to a presentation at 11:00 which is being given as part of the University program.

If you have not yet signed up for the Field Trip, you MUST advise Van W2DLT that you plan to join us. There are several car pools being formed, or you can travel on your own. We need to arrive in the area early, NLT 09:30 so that we can park and get organized to attend the lecture. Contact Van at [W2DLT@ARRL.net](mailto:W2DLT@ARRL.net) by April 12<sup>th</sup> if you plan to join us.

Following K2KJI's presentation and before the official meeting was opened, Van's wife Lori announced that Van's birthday is this week and she had a very nice birthday cake, which was shared among all those present. Van admitted that he is a year older than last year.

The Club's Vice President NP4H called the meeting to order at 7:30 PM. At his request the members present in person rose and recited the Pledge of Allegiance.

## April 2025 FLARC Business Meeting, cont'd.

Club Secretary W2JC checked the officer role and found the following:

President	Gene	WO2W	Present (by Zoom)
Vice President	Nomar	NP4H	Present
Treasurer	Robert	KD2SOG	Present (by Zoom)
Secretary	Jim	W2JC	Present
Trustee	Van	W2DLT	Present
Trustee	Judith	KC2LTM	Present (by Zoom)
Trustee	Noel	W2MSA	Present (by Zoom)

The Secretary confirmed to the President that a quorum existed in order for the meeting to proceed and business be conducted.

The President asked if there were any visitors present; however, he introduced a new member – Carolyn KE2FIO – who spoke briefly to the group and thanked them for the warm welcome.

The President then asked for a motion to approve the minutes of the meeting held March 7, 2025 as published in the February Resonator. Upon motion made and seconded the minutes were unanimously approved.

The President then called for the Treasurer's report. Robert KD2SOG was on Zoom because he is the latest to fall under the spell of the flu. The Treasurer gave the balance in our account, and indicated that is \$762 from last month, due to the purchase of three desktop computers to replace the old and slow ones at operating positions 1, 2 and 4. And also the purchase of a new grill for use at Field Day and other events. The new grill can operate on the small containers of propane and does not require lugging and storing the big 20 pound tanks. Treasurer further noted that several membership renewals have been received.

Treasurer's report was accepted with no comments or questions.

Dave WO2X reported for the Technical Committee and indicated that previously two antennas had been purchased with the anticipation of replacing the Optibeam with a SkyHawk and a 12m/17m beam. However, after extensive further discussion it was decided to keep the Optibeam and acquire a new 10m/6m interlaced Yagi to be mounted on the mast, above the Optibeam. "That'll add the 10 meter band as well as 6 meters, and in the solar minimum 6 meters will be useful in the spring and fall. You know, during sporadic E seasons it's not dependent on the sunspots. And so the antenna and the balun have been ordered and will be delivered soon." Because of the size of the Optibeam and the mechanical challenge of getting the new antenna above the Optibeam and attached to the mast, it has been decided to use a professional tower climber to do the work. FLARC members will assemble the new 10m/6m antenna and have it ready on the roof for the installation. (It was also reported that we had purchased the original two antennas for \$600 and after the plans changed we have already sold one of them for the same price.)

Dave WO2X further reported that the 3 new desktop computers, with 16GB of RAM and solid state drive, have been installed and configured and are now operational at positions 1 and 4; Jim W2JC has the new computer at position 2 receiving and transmitting FT8, but has more enhancements he wants to add.



## **April 2025 FLARC Business Meeting, cont'd.**

The replaced PCs will be kept on hand as backup until we are sure there is nothing more we need to move to the new computers.

Noel W2MSA, our Station Manager, indicated plans to use one of the replaced computers, with some upgrade and enhancements added, at position 3 where it is a less demanding stress on the software.

Van W2DLT gave a report for the Contest Committee, indicating there is not much happening in the way of contests in the near future, but he will have a list for the May Resonator of summer and fall contests.

Van then reiterated his need to alert the Scranton club of how many people we will have for our Field Trip, because the need to allocate enough space for lunch as well as the technical presentation. Following lunch, Van indicated that we will be able to go onto the roof to see the view (!) and to admire the Log Periodic antenna (if you are not familiar with these monsters, "google" it and see how awesome they are).

Summing up, Van also provided some information about the East Coast Reflector.

"The East Coast reflector is a linked bridge network of repeaters, nodes, and technologies that provide amateur radio operators with a convergence of platforms where users of various systems, such as Allstar, IRLP, Dstar, DMR, Asus System Fusion, Echolink, ham shack, hotline, and hams over IP can seamlessly communicate across the country and around the world." Anyone interested in finding out more details, contact Van W2DLT.

President WO2W then enumerated the dates of all the upcoming FLARC events (these will be listed in the April Resonator newsletter).

Station Manager Noel W2MSA reminded members that if anyone brings something to donate to the club the members present should accept the items and be sure that they are labeled with the name, call sign if any, what the item is, and that it's being donated. And if members have been using the workbenches, please be sure they are cleaned up and neat before you leave.

Jim N2JLF reminded all, on behalf of the EmComm SIG, that he is having a training session at the American Red Cross office in Fairfield, NJ at 09:00 on Saturday, April 12<sup>th</sup>. The meeting will cover voice transmission of EmComm type messages and also planning for the upcoming SET Simulated Emergency Test. For more info, contact Jim at [N2JLF@ARRL.net](mailto:N2JLF@ARRL.net)

Nomar NP4H mentioned that he had recently been elected to the position of Section Manager for ARRL, and will be looking to fill a number of Section positions in the near future. He's looking first for candidates from FLARC ... then he'll reach out to other clubs.

Meeting was adjourned at 8:20pm.

Submitted by Jim Cooper W2JC  
Secretary, FLARC